

## 1. Identification

<b>Product identifier</b>	<b>LP™ 111 Flow Improver</b>
<b>Other means of identification</b>	None.
<b>Recommended use of the chemical and restrictions on use</b>	
<b>Recommended use</b>	Flow Improver.
<b>Recommended restrictions</b>	Other uses are not recommended unless an assessment is completed, prior to commencement of that use, which demonstrates that the use will be controlled.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Manufacturer</b>	LiquidPower Specialty Products Inc.
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<b>Telephone</b>	1.713.339.8703 or 1.800.897.2774
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<b>Website</b>	www.LiquidPower.com
<b>Emergency telephone</b>	+1 703.527.3887 (USA) +1 800.424.9300 (USA)
<b>Singapore only</b>	800-101-2201 +(65)-31581349

## 2. Hazards identification

<b>GHS classification</b>	
<b>Physical hazards</b>	Not classified.
<b>Health hazards</b>	Not classified.
<b>Environmental hazards</b>	Not classified.
<b>GHS label elements, including precautionary statements</b>	
<b>Pictograms</b>	None.
<b>Signal word</b>	None.
<b>Hazard statements</b>	The mixture does not meet the criteria for classification.
<b>Precautionary statement</b>	
<b>Prevention</b>	Observe good industrial hygiene practices.
<b>Response</b>	Wash hands after handling.
<b>Storage</b>	Store away from incompatible materials.
<b>Disposal</b>	Dispose of waste and residues in accordance with local authority requirements.
<b>Other hazards which do not result in classification</b>	None known.
<b>Supplemental information</b>	None.

## 3. Composition/information on ingredients

<b>Substance or mixture</b>	Mixture
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The components are not hazardous or are below required disclosure limits.

## 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Wash off with soap and water. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Rinse with water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	Direct contact with eyes may cause temporary irritation.
<b>Indication of immediate medical attention and special treatment needed</b>	Treat symptomatically.

**General information** Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire-fighting measures

**Suitable extinguishing media** Water fog. Foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).

**Unsuitable extinguishing media** Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical** During fire, gases hazardous to health may be formed.

**Fire fighting equipment/instructions** Move containers from fire area if you can do so without risk.

**Special protective equipment and precautions for firefighters** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Specific methods** Use standard firefighting procedures and consider the hazards of other involved materials.

**General fire hazards** No unusual fire or explosion hazards noted.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures** Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.

**Environmental precautions** Avoid discharge into drains, water courses or onto the ground.

**Methods and materials for containment and cleaning up** Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

## 7. Handling and storage

**Precautions for safe handling** Avoid prolonged exposure. Ensure adequate ventilation. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities** Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

**Control parameters/Occupational exposure limits** No exposure limits noted for ingredient(s).

**Exposure guidelines** Follow standard monitoring procedures. No exposure standards allocated.

**Appropriate engineering control measures** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** If contact is likely, safety glasses with side shields are recommended.

#### Skin protection

**Hand protection** Use suitable protective gloves if risk of skin contact. Suitable gloves can be recommended by the glove supplier.

**Other** If prolonged or repeated contact is likely, chemical resistant clothing is recommended.

**Respiratory protection** In case of inadequate ventilation, use respiratory protection.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned.

## 9. Physical and chemical properties

### Appearance

**Physical state** Liquid.

**Form** Liquid.

**Colour** White.

**Odour** Mild.

**Odour threshold** Not available.

<b>pH</b>	10 - 12.4
<b>Melting point/freezing point</b>	0 °C (32 °F)
<b>Initial boiling point and boiling range</b>	100 °C (212 °F)
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	Same as water.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Explosive limit - lower (%)</b>	Not applicable.
<b>Explosive limit – upper (%)</b>	Not applicable.
<b>Vapour pressure</b>	23.8 mmHg (25°C)
<b>Vapour density</b>	< 1 (Air = 1)
<b>Relative density</b>	0.84 - 0.97 (25°C / 77°F)
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Disperses completely.
<b>Partition coefficient (n-octanol/water)</b>	Property has not been measured.
<b>Auto-ignition temperature</b>	Property has not been measured.
<b>Decomposition temperature</b>	Property has not been measured.
<b>Viscosity</b>	50 - 200 cP 511s-1 (Non-Newtonian) (25°C)
<b>Other data</b>	
<b>Explosive properties</b>	Not explosive.
<b>Kinematic viscosity</b>	Property has not been measured.
<b>Oxidising properties</b>	Not oxidising.

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidising agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	No adverse effects due to inhalation are expected.
<b>Skin contact</b>	Prolonged skin contact may cause temporary irritation.
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Ingestion</b>	Expected to be a low ingestion hazard.

<b>Acute toxicity</b>	Not expected to be acutely toxic.
<b>Symptoms</b>	Direct contact with eyes may cause temporary irritation.
<b>Skin corrosion/irritation</b>	No information available on the mixture. However, none of the components are classified in respect of this hazard (or are present at a level below the concentration threshold for classification).
<b>Serious eye damage/eye irritation</b>	No information available on the mixture. However, none of the components are classified in respect of this hazard (or are present at a level below the concentration threshold for classification).
<b>Respiratory or skin sensitisation</b>	
<b>Respiratory sensitisation</b>	No information available on the mixture. However, none of the components are classified in respect of this hazard (or are present at a level below the concentration threshold for classification).
<b>Skin sensitisation</b>	No information available on the mixture. However, none of the components are classified in respect of this hazard (or are present at a level below the concentration threshold for classification).

<b>Germ cell mutagenicity</b>	No information available on the mixture. However, none of the components are classified in respect of this hazard (or are present at a level below the concentration threshold for classification).
<b>Carcinogenicity</b>	No information available on the mixture. However, none of the components are classified in respect of this hazard (or are present at a level below the concentration threshold for classification).
<b>Reproductive toxicity</b>	No information available on the mixture. However, none of the components are classified in respect of this hazard (or are present at a level below the concentration threshold for classification).
<b>Specific target organ toxicity - single exposure</b>	No information available on the mixture. However, none of the components are classified in respect of this hazard (or are present at a level below the concentration threshold for classification).
<b>Specific target organ toxicity - repeated exposure</b>	No information available on the mixture. However, none of the components are classified in respect of this hazard (or are present at a level below the concentration threshold for classification).
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Chronic effects</b>	None known.
<b>Relevant negative data</b>	No data available.
<b>Other information</b>	None known.

## 12. Ecological information

<b>Ecotoxicity</b>	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
<b>Persistence and degradability</b>	No data available.
<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in soil</b>	This product is water soluble and may disperse in soil.
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

<b>Disposal methods/information</b>	Waste material from this product should not be exposed to waste streams or sumps containing any concentration of hydrocarbon. This will cause formation of gelled substances that may plug pipes. Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
<b>Special precautions</b>	Dispose in accordance with all applicable regulations.

## 14. Transport information

<b>ADR</b>	Not regulated as dangerous goods.
<b>RID</b>	Not regulated as dangerous goods.
<b>ADN</b>	Not regulated as dangerous goods.
<b>IATA</b>	Not regulated as dangerous goods.
<b>IMDG</b>	Not regulated as dangerous goods.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable.

## 15. Regulatory information

### Safety, health and environmental regulations specific for the product in question

#### **Prior Informed Consent (PIC) Substances (Environment Protection and Management Act, 2nd Schedule, Part 1, Jul. 1, 2013)**

Not regulated.

#### **Chemical Weapons Prohibition (Act)**

Not applicable.

#### **Environmental Protection and Management (Hazardous Substances) Regulations**

Not applicable.

#### **Environmental Public Health Act**

Not applicable.

## Misuse of Drugs Act

### Controlled Narcotic Drugs (Misuse of Drugs Act, First Schedule, Part I, II & III, as amended)

Not regulated.

### Drug Precursors (Misuse of Drugs Act, Third Schedule, Parts I & II, as amended)

Not regulated.

### Controlled Specified Drugs (Misuse of Drugs Act, Fourth Schedule, as amended)

Not regulated.

### Temporarily Listed Drugs (Misuse of Drugs Act, Fifth Schedule, as amended)

Not regulated.

## International regulations

### Montreal Protocol

Not applicable.

### Stockholm Convention

Not applicable.

### Rotterdam Convention

Not applicable.

### Kyoto Protocol

Not applicable.

### Basel Convention

Not applicable.

## International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	Yes
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information

**References** Not available.

### Issued by

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**Key/legend**

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Not applicable.